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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,938	09/09/2003	Barin Geoffry Haskell	APLE.P0057	3099
62224 7590 01/23/2007 STATTLER, JOHANSEN, AND ADELI LLP 1875 CENTURY PARK EAST SUITE 1360 LOS ANGELES, CA 90067			EXAMINER PHILIPPE, GIMS S	
			ART UNIT	PAPER NUMBER
			2621	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/23/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/658,938

Applicant(s)

HASKELL ET AL.

Examiner

Gims S. Philippe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-11, 14-17, 21-23, 25, 26, 29 and 30 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 12, 13, 18-20, 24, 27 and 28 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :8/12/04, 1/05/05, 1/11/05, 2/01/05, 9/19/05, .

DETAILED ACTION

This is a first office action in response to application no. 10/658,938 filed on September 9th 2003 in which claims 1-30 are presented for examination.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3, 8-9, 14, 21-22, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhao et al. (US Patent no. 6,944,224).

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As per claims 1 and 21, Zhao discloses a method of processing a video sequence comprised of a plurality of frames to determine a number of bidirectional motion compensated frames to be encoded in a set of successive frames in the plurality of frames (See Zhao col. 11, lines 49-54) the method comprises computing motion vectors for at least one frame in the set of successive frames (See Zhao col. 2, lines 18-20), determining a motion cost value for at least one frame in the set of successive frames, determining a derived cost value based on the motion cost value for at least one frame in the set of successive frames (See Zhao col. 2, lines 20-30), and determining the number of B-frames to be encoded in the set of successive frames based on the derived cost value (See Zhao col. 11, lines 49-54 and col. 50, lines 5-7 and col. 47, lines 60-65).

As per claims 8 and 25, Zhao discloses the same method of encoding a video sequence in two passes, the video sequences being comprised of a plurality of frames, the method comprises performing a first pass of operations on a set of successive frames of the plurality of frames (See Zhao col. 11, lines 49-54), the first pass of operations comprising computing motion vectors for at least one frame in the successive set of frames (See Zhao col. 2, lines 18-20), and deriving a motion cost value for at least one frame in the set of successive frames, determining a derived cost value based on the motion cost value for at least one frame in the set of successive frames (See Zhao col. 2, lines 20-30, and col. 46, lines 61-67), and determining a number of bidirectional motion compensated frames to be encoded in the set of successive frames based on

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the derived cost value (See col. 11, lines 49-54), and performing a second pass of operations on the set of successive frames, the second pass of operations comprising encoding the determined number of frames in the set of successive frames as B frames by using at least one motion vector computed in the first pass (See fig. 11, item 1108, and col. 37, lines 30-65 and col. 38, lines 19-43).

As per claims 2, 9, 22, and 26 most of the limitations of these claims have been noted in the above rejection of claims 1 and 21. In addition, Zhao's motion cost value is related to the number of bits required to encode the motion vectors of the frame (See Zhao col. 1, lines 52-54).

As per claim 3, most of the limitations of this claim have been noted in the above rejection of claim 1. In addition, Zhao further discloses computing motion compensation errors for at least one frame in the set of successive frames, wherein the motion cost value is related to the number of bits required to encode the motion vectors and the motion compensation errors of the frames (See Zhao col. 2, lines 45-57).

As per claim 14, most of the limitations of this claim have been noted in the above rejection of claim 1. In addition, since the sequence is generally IBBPBBI, if there is no scene change the sequence will become PBBPB BPBP, it is considered inherent that the frame to be encoded after the B frames is a P frame when no scene cut/change is detected.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-5, 10-11, 15-17, 23, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al. (US Patent no. 6,944,224) in view of Divakaran et al. (US Patent no. 7,003,038).

Regarding claims 15-16 and 29, Zhao a method of detecting scene cuts in a video sequence comprised of a plurality of frames, the method comprising computing motion vector for a first frame and a second frame in the plurality of frames (See Zhao col. 2, lines 16-20), determining a motion cost value for the first frame and the second frame (See Zhao col. 2, lines 20-24), determining a scene cut between the first frame and the second frame (See Zhao col. 30, lines 10-15).

It is noted that Zhao is silent about determining whether the scene cut is based on a ratio between motion cost value of the first frame and the second frame.

Divakaran discloses determining a scene cut based on a ratio between motion cost value of the first frame and the second frame (See Divakaran col. 8, lines 7-23).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Zhao's scene cut step by

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incorporating Divakaran step of determining a scene cut based on a ratio between motion cost value of the first frame and the second frame. The motivation for performing such a modification in Zhao is to find motion change levels in order to determine whether the content is changing substantially from frame to frame as taught by Divakaran (See Divakaran col. 7, lines 66-67 and col. 8, lines 20-23).

As per claims 4-5, 10-11, and 23, the limitations of these claims have been noted in the above rejection of claims 15 and 29. In addition, an average value is a ratio.

As per claims 17 and 30, most of the limitations of these claims have been noted in the above rejection of claims 15 and 29. In addition, Zhao's motion cost value is related to the number of bits required to encode the motion vectors of the frame (See Zhao col. 1, lines 52-54).

5. Claims 6-7, 12-13, 18-20, and 27-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Mukerjee et al. (US Patent no. Application Publication no. 2005/0013365 A1) teaches advanced bi-directional predictive coding of video frames.


Zick et al. (US Patent no. 5774593) teaches automatic scene decomposition and optimization of MPEG compressed video.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gims S. Philippe whose telephone number is (571) 272-7336. The examiner can normally be reached on M-F (10:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dastouri Mehrdad can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Gims S Philippe
Primary Examiner
Art Unit 2621

GSP

January 16, 2007